Jerry William Ritchey, D.V.M., Ph.D.. D.A.C.V.P.
Professor of Pathology
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Contact Information:

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Education:

1987: BS, Microbiology, Oklahoma State University, Stillwater, OK
1991: DVM, Veterinary Medicine, Oklahoma State University, Stillwater, OK
1997: PhD, Immunology, North Carolina State University, Raleigh, NC

Academic Appointments:

2006-present: Faculty supervisor, Oklahoma State College of Veterinary Medicine Flow Cytometry Laboratory
1997-present: Assistant (1997-2003), Associate (2003-2009) and Full (2009-present) Professor of Pathology, Department of Veterinary Pathobiology, College of Veterinary Medicine, Oklahoma State University, Stillwater, OK.
2012-2013: Interim Director, Oklahoma Animal Disease Diagnostic Laboratory
1993-1997: Graduate Research Assistant, Department of Microbiology, Pathology, and Parasitology, College of Veterinary Medicine, North Carolina State University, Raleigh, NC. Major: Immunology; Minor: Biotechnology.
1991-1993: Resident in Veterinary Anatomic Pathology, Veterinary Teaching Hospital, College of Veterinary Medicine, North Carolina State University, Raleigh, NC

Research Interests:
Immunopathogenesis of infectious diseases
Pathology of the heart, lung and central nervous systems

Awards and Honors
2012: OSU-CVM, Class of 2010 Commencement Reader (by class vote)
2010: OSU-CVM, Class of 2010 Commencement Hooder (by class vote)
2008: OSU-CVM, Class of 2008 Commencement Address (by class vote)
2007: Gamma Sigma Delta Excellence in Teaching Award
2006: Regents' Distinguished Teacher, Oklahoma State University
2006: OSU-CVM, Class of 2006 Commencement Address (by class vote)
2000: OSU-CVM, Class of 2005 Commencement Address (by class vote)
2003: Regents' Distinguished Teacher, Oklahoma State University
2002: Sigma Xi Young Investigator Award, Oklahoma State University

2002: OSU-CVM, Class of 2002 Commencement Address (by class vote)
1997: Mentored Clinical Scientist Development Award, NIH

Other Professional Experiences and Memberships:

2010: Invited Reviewer, USDA-CSREES Avian Influenza CAP
2010: Invited Reviewer, NIH NIAID Special Emphasis Panel (HIV Vaccine Discovery)
2009: Invited Reviewer, NIH NIAID Special Emphasis Panel (HIV Vaccine Discovery)
2008: Panel Manager, USDA-CSREES PRRSV CAP
2007: Panel Manager, USDA-CSREES Avian Influenza CAP
2006: Invited Reviewer, NIH NIAID Special Emphasis Panel (Allergy)
2004: Invited Reviewer, NIH NIAID Special Emphasis Panel (Immune System Development and the Genesis of Asthma)
1996: Diplomate, American College of Veterinary Pathologists
1991: American Veterinary Medical Association
1991: Phi Zeta, Honor Society of Veterinary Medicine
1991: Gamma Sigma Delta, Honor Society of Agriculture

Research Support:

Current:

2013-2018: NIH COBRE, "Immunopathology Core Program", Role: Core Director, $645,000, as part of "Oklahoma Center for Respiratory and Infectious Diseases (OCRID)", Project Coordinator: Liu L, Total budget, $11,274,000
2012-2014: OCAST, "Antimicrobial therapy using immunomodulatory peptides", Role: Pathology support, $90,000 (PI: Zhang G)
2012-2014: OCAST, "Development of immune boosting feed additives", Role: Pathology support, $90,000 (PI: Zhang G)
2011-2014: OCAST, "Photonic-needle assessment of hepatic steatosis", Role: Pathology support, $135,000 (PI: Piao, D)
2013: OSU Office of Research, Major Instrumentation Grant Program, "BD FACSAria flow cytometer, cell sorter", Role: Co-Principal Investigator, $316,776

Past:

2009-2011: Grayson Jockey Club, "Prevention of EHV-1 myeloencephalitis by delayed therapy"
Role: Pathology support, $104,431 (PI: Maxwell LK)
2009-2011: OCAST, "Pre-Clinical Investigation of Nitrone Anti-Glioma Agent", Role: Pathology support, $14,000 (PI: Towner, R)
2008-2011: USDA, "Enhancing Disease Resistance by Boosting Innate Immunity", Role: Pathology support, $365,757 (PI: Zhang, G)
2007-2010: Army Med Res Mat Command, "Transrectal near-infrared optical tomorgraphy for prostate imaging", Role: Pathology support, $306,238 (PI: Piao D)
2007-2009: OCAST Applied Research, "Novel antimicrobial peptides as anti-sepsis drugs", Role: Pathology support, $90,000 (PI-Zhang G)
2007-2009: OCAST Health Research, "Enteric defensins and inflammatory bowel disease", Role: Pathology support, $90,000 (PI: Zhang G)

2007-2008: ACLAM Foundation and Dolphin Trust, "Model-tested efficacy of nucleoside analogs for treatment of BV infection", Role: Principle Investigator, $10.000
2002-2006: NIH NCRR, "Murine model for monkey B virus infection", Role: Principle Investigator, $695,050
2000-2003: USDA CSREES, "Genetic construction of bovine CD18 that resists P. haemolytica leukotoxin", Role: Principle Investigator, $150,000
1998-2000: OAES, "Characterization of the alveolar macrophage cytokine responses to P. haemolytica", Role: Principle Investigator, $36,000
1997-2001: NIH-NIAID K08, "Microbicidal defects of alveolar macrophages in FIV-infected cats.", Role: Principle Investigator, $343,656

Selected Publications:

1. Liang Y-H, Hudson LC, Levy JK, Ritchey JW, Tompkins WA, Tompkins MB. T cells over expressing IFN and IL10 are found in the thymus and secondary lymphoid tissues of FIV-infected cats. J Inf Dis 181: 564-575, 2000.
2. Ritchey JW, Levy JK, Bliss SK, Tompkins WA, Tompkins MB. Constitutive Expression of Type 1 and Type 2 cytokines by alveolar macrophages from feline immunodeficiency virus infected cats. Vet Immunol Immunopathol 79:83-100, 2001.
3. Chen WR, Liu H, Ritchey JW, Bartels KE, Lucroy MD, Nordquist RE. Effect of different components of laser immunotherapy in treatment of metastatic tumors in rats. Cancer Res 62: 4295-4299, 2002.
4. Ritchey JW, Ealey KA, Payton ME, Eberle R. Comparative pathology of infections with baboon and African green monkey α-herpesviruses in mice. J Comp Path. 127: 150-161, 2002.
5. Breshears MA, Black DH, Ritchey JW, Eberle R. Construction and in vivo detection of an enhanced green fluorescent protein expressing strain of Saimirine Herpesvirus 1 (SaHV-1). Arch Virol 148:311-327, 2003.
6. Ross JW, Malayer JR, Ritchey JW, Geisert RD. Characterization of the Interleukin-1 (beta) system during porcine trophoblastic elongation and early placental attachment. Biol Reprod 69: 1251-1259, 2003.
7. Wynn VM, Davidson EB, Higbee RG, Ritchey JW, Ridgway TD, Bartels KE, Lucroy MD. In vitro effects of pulsed holmium laser energy on canine urolith and porcine cadaveric urethra. Lasers Surg Med 33:243-246, 2003.
8. Rogers KM, Ealey KA, Ritchey JW, Black DH, Eberle R. Pathogenicity of different baboon Herpesvirus papio 2 isolates is characterized by either extreme neurovirulence or complete apathogenicity. J Virol 77: 10731-10739, 2003.
9. Levy JK, Liang Y, Ritchey JW, Davidson MG, Tompkins WA, Tompkins MB. Failure of FIV-infected cats to control Toxoplasma gondii correlates with reduced IL2, IL6 and IL12 and elevated IL10 expression by lymph node T cells. Vet Immunol Immunopathol 98: 101-111, 2004.
10. Stair EL, Reddy G, Ritchey JW, Saliki JT, Qualls Jr. CW. Effects of 1,3,5-Trinitrobenzene on cytotoxicity and metabolic activity of Type I astrocytes of rats. Int J Toxicol 24: 51-57, 2005.
11. Breshears MA, Eberle R, Ritchey JW. Temporal progression of viral replication and gross and histological lesions in Balb/c mice inoculated epidermally with Saimirine herpesvirus 1 (SaHV-1). J Comp Path 133: 103-113, 2005.

12. Coke RL, Backues KA, Hoover JP, Saliki JT, Ritchey JW, West GD. Serologic responses after vaccination of Fennec foxes (Vulpes zerda) and Meerkats (Suricata suricata) with a live, canarypox-vectored canine distemper virus vaccine. J Zoo Wildlife Med 36: 326-330, 2005.
13. Ritchey JW, Payton ME, Eberle R. Clinicopathological characterization of monkey B virus infection in mice. J Comp Path 132: 202-217, 2005.
14. Rogers KM, Ritchey JW, Payton M, Black DH, Eberle R. Neuropathogenesis of herpesvirus papio 2 in mice parallels infection with Cercopithecine herpesvirus 1 (B virus) in humans. J Gen Virol 87:267-276, 2006.
15. Ritchey JW, Black DH, Rogers KM, Eberle R. In vivo experimentation with simian herpesviruses: assessment of biosafety and molecular contamination. J Am Assoc Lab Anim Sci. 45:7-12, 2006.
16. Erkert RS, Moll HD, Macallister CG, Confer AW, Ritchey JW. Infiltrative lipoma in an American Quarter Horse gelding. Equine Vet Educ 19:380-383, 2007.
17. K. Singh, M. J. Boileau, R. N. Streeter, R. D. Welsh, W. A. Meier and Ritchey, JW. Granulomatous and Eosinophilic Rhinitis in a Cow Caused by Pseudallescheria boydii Species Complex (Anamorph Scedosporium apiospermum). Vet Pathol 44:917-920, 2007.
18. Jiang Z, Piao D, Xu G, Ritchey JW, Holyoak GR, Bartels KE, Bunting CF, Slobodov G, Krasinki JS. Trans-rectal ultrasound-coupled near-infrared tomography of the prostate. Part II: Experimental demonstration. Optics Express 22:17505-17520, 2008.
19. Jiang Z, Holyoak GR, Bartels KE, Ritchey JW, Xu G, Bunting CF, Slobodov G, Piao D. In vivo trans-rectal ultrasound coupled optical tomography of a transmissible venereal tumor model in the canine pelvic canal. J. Biomed Optics 14:030506-030508, 2009.
20. Broshnahan MM, Hobrook TC, Gilliam LL, Ritchey JW, Confer AW. Intra-abdominal hypertension in two adult horses. J Vet Emerg Critical Care 19:174-180, 2009.
21. Broshnahan MM, Holbrook TC, Ritchey JW. Neuroaxonal dystrophy associated with cerebellar dysfunction in a 5-month-old Pony of the Americas colt. J Vet Intern Med 23:1303-1306, 2009
22. Bommineni YR, Achanta M, Alexander J, Sunkara LT, Ritchey JW, Zhang G. A fowlicidin-1 analog protects mice from lethal infections induced by methicillin-resistant Staphylococcus aureus. Peptides 31:1225-1230, 2010.
23. Stern AW, Ritchey JW, Hall B, Ketz-Riley CJ, Genova SG. Non-steroidal anti-inflammatory drug-associated renal papillary necrosis in a white-tailed deer (Odocoileus virginianus). J Vet Diagn Invest 22:476-478, 2010.
24. Jiang Z, Piao D, Holyoak GR, Ritchey JW, Bartels KE, Slobodov G, Bunting CF, Krasinski JS. Trans-rectal ultrasound-coupled spectral optical tomography of total hemoglobin concentration enhances assessment of the laterality and progression of a transmissible venereal tumor in canine prostate. Urology 77:237-242, 2011.
25. Singh K, Confer AW, Hope JC, Rizzi T, Wyckoff III JH, Weng HY, Ritchey JW. Cytotoxicity and cytokine production by bovine alveolar macrophages challenged with wild-type and leukotoxin-deficient Mannheimia haemolytica. Vet J 188:221-227, 2011.
26. Singh K, Ritchey JW, Confer AW. Mannheimia haemolytica: bacterial-host interactions in bovine pneumonia. Vet Pathol 48: 338-348, 2011.
27. Ritchey JW, Davis MS, Breshears MA, Willard MD, Williamson KK, Royer CM, Payton ME, Cragun AS. Gastritis in Alaskan racing sled dogs. J Comp Pathol 45: 68-76.
28. Jiang Z, Piao D, Bartels KE, Holyoak GR, Ritchey JW, Ownby CL, Rock K, Slobodov G. Transrectal ultrasound-integrated spectral optical tomography of hypoxic progression of a regressing tumor in a canine prostate. Technol Cancer Res Treat 10:519-531, 2011.
29. He T, Doblas S, Saunders D, Casteel R, Lerner M, Ritchey JW, Snider T, Floyd RA, Towner RA. Effets of PBN and OKN007 in rodent glioma models assessed by 1H MR spectroscopy. Free Radic Biol Med 51:490-502, 2011.

30. Tsukamoto H, Chernogorova P, Avata K, Gerlach UV, Rughani A, Ritchey JW, Ganesan J, Follo M, Zeiser R, Thompson LF, Idzko M. Deficiency of CD73/ecto-5'-nucleotidase in mice enhances acute graft-versus-host disease. Blood {Epub 2012; PMID:22262774}